

V. SUSTAINABLE ARCHITECTURE



Architect [William McDonough](#) conceived of his green house of the future as a tree. The surface of the house acts as a “leaf,” collecting sunlight that transforms into energy which can heat water and provide electricity. The “trunk” is made of carbon tubes instead of wood or metal. An underground heat-pump exchange system forms the “roots” of the house. When the useful life of the house is over, the remains would be biodegradable.



In the design of their green house, [Cook + Fox](#) looked to biomimicry, the technology that examines natural processes and adapts them in the built environment. The exterior of their LiveWorkHome is sheathed with a biomorphic skin that turns dark or light in response to sunlight. The material of the façade can also capture rain and condensation to meet water needs.



[Rios Clementi Hale Studios](#) created a playful Incredible Edible House that has a vegetable garden for exterior walls.



[Mouzon Design's](#) Smart Dwelling combines older methods with modern technology. A breeze chimney built in the middle of the house is an ancient form of air conditioning where the difference between outside and indoor air pressure forces cool air to enter the house through windows and hot air to exit through the chimney stack. High-tech solar panels built into the exterior walls and the roof provide electricity and hot water. The designer believes that one of the most important ways to make a house sustainable house is to make it compact.